

MEETING ABSTRACT

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Treatment of geriatrics lymphedema with shockwave therapy

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Background

The radial shockwaves are pneumatically generated and emitted at the tip of the applicator and coupled into the human tissue, up to a depth of up to 35mm. The effects on the tissue are: increasing of metabolic processes, antiphlogistic and vasodilatation effects and neoangiogenesis with correlate increase of the fluid transport.

Materials and methods

The AA. treated 72 patients affected by primary (25) or secondary (47) lymphedema of upper and lower limbs (47 females and 25 males). Admission criteria: age between 70 and 85, complaints lasting more 1 than year with associated localized or diffuse tissue fibrosis. Exclusion criteria: specific therapy over the past 7 days, pregnancy, coagulation disorders, acute phlogosis.

Patients were treated for 10 sessions, 2.500 – 3.500 impulses each (in function of the extension at the fibrotic area). The energy flow density during treatment was equal to a working pressure of 2 bars. About 3,5 cm. depth on the suprafascial tissue. Treatment frequency was 4 Hz in multiple shock modality. Local anaesthesia was never used.

Results

Patients were evaluated 2 weeks and 1 month after treatment. They show an average decrease of the 26% of the circumference of the limb and a subjective and objective reduction of tissue consistence, above all in fibrotic areas.

Side effects such as local irritation were observed; petechia, hematomas, swelling and low pain 24-36 hours after treatment. Only in 1 patient the suspension of treatment was required. The high resolution echography demonstrated a medium reduction of the skin and

epifascial thickness of 32%, corresponding to the clinical observations.

Conclusions

This kind of shock wave therapy is very useful in primary and secondary lymphedema, not only for the decreasing of the limb volume, but above all for the treatment of the fibrotic areas. The technique is easy to apply and can be performed both by the physician as by the physiotherapist. There are no contraindications to the application. The technique can be associate with the other manual and mechanical treatment used for the lymph-drainage.

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References

1. Michelini S, Failla A, Moneta G, Zinicola V, Macaluso B, Cardone M, Antonucci D: Treatment of Lymphedema with shockwave therapy: preliminary study. *The European Journal of Lymphology and related problems*. 2007, **17**(51):29.
2. Ammendola A, et al: Effects of unfocussed shockwave treatment in human soft tissue: preliminary study. *4 th Congress of the International Society for Musculoskeletal Shockwave therapy*. Berlin 2001.

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